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PATENTAttorney Reference Number 4239-61854
Application Number 10/031,158

(c) a polypeptide with at least 90% sequence identity to the amino acid sequence set forth as SEQ ID NO: 14 that is specifically recognized by an antibody that specifically recognizes the protein comprising the amino acid sequence set forth as SEQ ID NO: 14; or

(d) a polypeptide that has at least 90% sequence identity with the amino acid set forth as SEQ ID NO: 14 and that, when processed and presented in the context of Major Histocompatibility Complex molecules, activates T lymphocytes against cells that express the protein encoded by the amino acid sequence set forth as SEQ ID NO: 14.

2. (Amended) The substantially purified polypeptide of claim 1, wherein the polypeptide comprises the amino acid sequence set forth as SEQ ID NO: 14, or a variant thereof having a conservative substitution.

3. (Amended) The substantially purified polypeptide of claim 1, wherein the polypeptide comprises an immunogenic fragment of the amino acid sequence as set forth as SEQ ID NO: 14, or a variant thereof having a conservative substitution.

4. (Amended) The substantially purified polypeptide of claim 1, wherein the polypeptide has at least 90% sequence identity to TARP an amino acid sequence as set forth as SEQ ID NO: 14 and is specifically recognized by an antibody that specifically recognizes the amino acid sequence as set forth as SEQ ID NO: 14.

5. (Amended) The substantially purified polypeptide of claim 1, wherein the polypeptide has at least 90% sequence identity to the amino acid sequence as set forth as SEQ ID NO: 14 and that, when processed and presented in the context of Major Histocompatibility Complex molecules, activates T lymphocytes against cells that express the protein encoded by the amino acid sequence as set forth as SEQ ID NO: 14.

6. (Amended) A composition comprising a polypeptide of claim 1 and a pharmaceutically acceptable carrier.

Please cancel claims 7-9.

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10. (Amended) A substantially purified recombinant nucleic acid molecule encoding the polypeptide of claim 1.

Please cancel claims 11-14.

15. (Amended) The substantially purified recombinant nucleic acid molecule of claim 10, operably linked to a promoter.

16. (Amended) The substantially purified recombinant nucleic acid molecule of claim 15, wherein the nucleotide sequence encodes a polypeptide comprising the amino acid sequence as set forth as SEQ ID NO: 14, or a variant thereof having a conservative substitution.

17. (Amended) The substantially purified recombinant nucleic acid molecule of claim 15, wherein the nucleotide sequence encodes a polypeptide comprising the amino acid sequence of an immunogenic fragment of the protein comprising the amino acid sequence as set forth as SEQ ID NO: 14, or variant thereof having a conservative substitution.

18. (Amended) The substantially purified recombinant nucleic acid molecule of claim 12, wherein the nucleotide sequence encodes a polypeptide with at least 90% sequence identity to an amino acid sequence as set forth as SEQ ID NO: 14 and that is specifically recognized by an antibody that specifically recognizes a protein comprising the amino acid sequence as set forth as SEQ ID NO: 14.

19. (Amended) The substantially purified recombinant nucleic acid of claim 12, wherein the nucleotide sequence encodes a polypeptide that has at least 90% sequence identity to the amino acid sequence as set forth as SEQ ID NO: 14 and that, when processed and presented in the context of Major Histocompatibility Complex molecules, activates T lymphocytes against cells that express the amino acid sequence as set forth as SEQ ID NO: 14.

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20. (Amended) A method for eliciting an immune response in a subject, comprising administering to a subject a composition, comprising:

- (a) the polypeptide of claim 1;
- (b) a substantially purified nucleic acid encoding the polypeptide of claim 1 in an expression vector;
- (c) an antigen presenting cell pulsed with a polypeptide comprising an epitope of the polypeptide of claim 1, or an immunogenic fragment thereof thereby eliciting an immune response in the subject.

Please cancel claims 21-23.

24. (Amended) The method of claim 20 wherein the subject has prostate cancer.

25. (Amended) The method of claim 20, wherein the subject has breast cancer.

26. (Amended) The method of claim 20, wherein the subject is a female at risk for developing breast cancer.

27. (Amended) The method of claim 20 wherein the administered composition further comprises CD8+ cells that are sensitized with antigen presenting cells pulsed with a polypeptide comprising an epitope of the protein having an amino acid sequence as set forth as SEQ ID NO: 14, or a variant thereof having a conservative substitution.

28. (Amended) The method of claim 20, further comprising co-administering to the subject an immune adjuvant comprising a non-specific immune adjuvant, a subcellular microbial product and fraction, a hapten, an immunogenic protein, an immunomodulator, an interferon, a thymic hormone, or a colony stimulating factor.

29. (Amended) The method of claim 20, comprising administering an antigen presenting cell pulsed with a polypeptide comprising an epitope of the protein having an amino

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acid sequence as set forth as SEQ ID NO: 14, or a variant thereof having a conservative substitution.

30. (Amended) The method of claim 20, wherein the substantially purified nucleic acid is in a recombinant virus.

31. (Amended) The method of claim 20 wherein the nucleic acid has a sequence as set forth as SEQ ID NO: 13 or a degenerate version thereof.

32. (Amended) A method of eliciting an immune response, comprising administering to a subject a composition, comprising a recombinant bacterial cell comprising the nucleic acid molecule of claim 15.

33. (Amended) A method of eliciting an immune response, comprising administering to a subject a composition, comprising an autologous recombinant cell comprising the nucleic acid molecule of claim 15.

34. (Amended) The method of claim 27 wherein the CD8+ cells are cytotoxic T lymphocytes.

35. (Amended) The method of claim 34 wherein the cytotoxic T lymphocytes are tumor infiltrating lymphocytes.

36. (Amended) A method for detecting a cancer in a subject, comprising detecting in a sample from the subject the hybridization of a probe specific for a nucleic acid that encodes the polypeptide of claim 1, whereby the hybridization of the probe to the nucleic acid indicates that the subject has cancer.

37. (Reiterated) The method of claim 36, comprising detecting the transcript.

38. (Reiterated) The method of claim 36, comprising detecting the protein.

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39. (Reiterated) The method of claim 36, comprising contacting RNA from the cell with a nucleic acid probe that specifically hybridizes to the transcript under hybridization conditions, and detecting hybridization.

40. (Amended) The method of claim 36, comprising disrupting the cell and contacting a portion of the cell contents with a chimeric molecule comprising a targeting moiety and a detectable label, wherein the targeting moiety specifically binds to the protein, and detecting the label bound to the protein.

41. (Amended) The method of claim 36, wherein the hybridization is detected in a sample comprising a lymph node cell of the subject.

42. (Amended) The method of claim 36, wherein the hybridization is detected in a sample comprising a breast biopsy cell of the subject.

43. (Amended) An antibody that specifically binds to the polypeptide of claim 1.

44. (Amended) A method of modulating levels of a protein comprising the amino acid sequence as set forth as SEQ ID NO: 14 in a cell, comprising introducing into the cell a composition comprising: a ribozyme that specifically cleaves a nucleic acid of claim 10, an antisense oligonucleotide that specifically binds to a nucleic acid of claim 10, a DNA binding protein that binds specifically to a nucleic acid of claim 10, or a nucleic acid of claim 10, operatively linked to a promoter.

Please add the following new claims:

45. (New) The substantially purified polypeptide of claim 1, wherein the polypeptide comprises the amino acid sequence set forth as SEQ ID NO: 14.